

II. REMARKS

This reply is fully responsive to the Final Office Action dated June 20, 2005, and is filed within six - (6) months following the mailing date of the Final Office Action. A request for a One Month Extension of Time to October 20, 2005 is enclosed herewith in addition to the credit card payment form to cover the fees therefor.

A. Claims Status Summary:

Claims 1 - 48 are pending in the application.

Claims 19 – 29, 31 – 44, and 46 – 48 were finally rejected under 35 U.S.C. 102(b) as being anticipated by Viney et al. (US 6,034,722).

Claims 1 - 18 were finally rejected under 35 U.S.C. 103(a) as being unpatentable over Viney et al. (6,034,722) in view of Tyler (5,184,521).

Applicant notes, with appreciation, the Final Office Action's notification that no further informalities and objections remain for the specification and the claims.

B. Amendment Overview

Independent claim 19 has been amended to overcome the rejection of the prior office action based upon 35 USC § 102(b). Claim 19 has been amended to clarify the description of the invention and is presented above in a marked-up version herein in accordance with 37 CFR § 1.121.

New matter as described in 35 USC § 132 has not been added to the specification. Accordingly, entry of these changes is hereby respectfully requested.

C. Claims Rejections - 35 USC §102(b)

The Final Office Action rejected claims 19 – 29, 31 – 44, and 46 – 48 under 35 U.S.C. 102(b) as being anticipated by Viney et al. (US 6,034,722), hereinafter referred to as "Viney."

Viney Does Not Anticipate Independent Claim 19:

The newly amended claim 19 recites:

"A remote control device comprising:

*a video display for displaying the output of an imaging device;
one or more imaging platform motion controls;
at least one of iris, zoom, and focus controller for the imaging device; and
a camera control handle having one or more camera functions."*

The Final Office Action states, "For **Claim 19**, Viney et al. disclose, as shown in figures 1 – 4 and as stated in columns 2 (lines 66 and 67), 3 (lines 16 – 29, 43 – 45, and 56 – 58), 4 (lines 10 – 23 and 63 – 67), and 6 (lines 28 – 32, 44 – 48, and 55 – 60), a remote control (3) comprising:

a video display (20) for displaying the output of an imaging device (11);
one or more imaging platform motion controls (input unit 21);
at least one of iris, zoom, and focus controller (32) for imaging device;
and
a control handle (aiming control 31)."

At issue is the Final Office Action's association of the input unit 21 of Viney anticipating Applicant's claimed limitation of the "one or more imaging platform motion controls." Applicant respectfully traverses this rejection based on the Final Office Action's argument because the input unit 21 of Viney is in fact distinct from the disclosed invention and specifically does not equate to Applicant's "imaging platform

motion” control. The Viney patent relates to a surveying device, which is illustrated in FIG. 1 as a total station 1 set up on a tripod. The input units 21 refers to a collective or an aggregate of a plurality of controls that are part of the Remote Control and Viewing Unit 3 (RCVU) of the Viney reference. The various elements that comprise Viney’s input unit 21 grouping include “an aiming control 31, a focus control 32, a trigger input 33, and an alphanumeric input device 34.” (See column 5, lines 56-58). Therefore, the “input unit 21” itself does not control any one function, and in fact, is not a control, but rather a grouping or arrangement of controls. This is distinguished from Applicant’s “one or more imaging platform motion controls” that are actual controls rather than a grouping or arrangement.

In particular, column 5, lines 58 to 61 of this reference list the types of actual controls that are included within the input unit 21 grouping or arrangement by stating that “The controls include an aiming control 31, a focus control 32, a trigger input 33, and an alphanumeric input device 34.” (Emphasis added.)

Viney states the following in relation to each of the actual input controls that are included in the “input unit 21” grouping:

For the Aiming control 31 within the input unit 21 grouping:

Column 5, lines 58 to 61 of Viney state that “The aiming control 31 may be a joystick, trackball, touchpad, or any other suitable device which allows the user to manually command movement of the total station.”

For the focus control 32 within the input unit 21 grouping:

Column 5, lines 64 to 67 of Viney state that “The focus control 32 allows the user to remotely fine tune the focus of the camera 11.”

For the trigger input 33 within the input unit 21 grouping:

Column 6, lines 1 to 2 of Viney state that “The trigger unit 33 allows the user to command the total station to take a survey measurement.”

For the alphanumeric input device 34 within the input unit 21 grouping:

Column 6, lines 2 to 5 state that “The alphanumeric input device 34, which may be a conventional keyboard, allows the user to enter text or other symbolic data.”

Accordingly, it is respectfully submitted that the interpretation of the input unit 21 by the Final Office Action as the claimed “... one or more imaging platform motion controls (input unit 21)...” is incorrect. The input unit 21 of Viney is merely a grouping or arrangement of control elements, and does not control anything. It includes four actual controls, one of which is the aiming control 31 that allows the user to manually command movement of the total station. As such, the total station 1 is manually moved by the aiming control 31 that is grouped within the input unit 21 grouping, and not by the input unit 21. Thus, it is respectfully submitted that associating the “input unit 21” with the Applicant’s claimed limitation of “...*one or more imaging platform motion controls*....” is incorrect.

The Final Office Action further interpreted the language of claim 19 that recited, inter alia, “... *a camera control handle* ...” by associating the aiming control 31 of Viney with this claimed limitation. The newly amended claim 19 recites, inter alia, “...*a camera control handle having one or more camera functions* ...” The aiming control 31 cannot be a camera control handle having one or more camera functions because in column 5, lines 58 to 61 of Viney, states that “[t]he aiming control 31 may be a joystick, trackball, touchpad, or any other suitable device which allows the user to manually command movement of the total station.” (Emphasis added). In other words, the aiming control 31 is merely used to *move* the total station, and has nothing to do with a camera, much less be a camera control handle having one or more camera functions.

Claim 19 of the present application specifically recites, inter alia, two separate and distinct claimed limitations. The first claimed limitation of claim 19 recites, inter alia, “...*one or more imaging platform motion controls*...” and the second claimed limitation of claim 19 recites, inter alia, “...*a camera handle control having one or more camera functions*...” As stated above, the “input unit 21” is merely an arrangement of actual controls that includes an aiming control 31, a focus control 32, a trigger input 33, and an alphanumeric input device 34 and does NOT itself control anything. Therefore, it is respectfully submitted that the input unit 21 cannot be interpreted as the claimed limitation of “...*one or more imaging platform motion controls*...” In addition, as clearly stated by Viney, the “aiming control 31 may be a joystick, trackball, touchpad, or any other suitable device which allows the user to manually command movement of the total station,” and has nothing to do with a cameral control handle having one or more camera functions.

It is respectfully submitted that it is well settled that an anticipatory reference must teach every one of the limitations of the claim(s) alleged to be anticipated thereby. In order to establish a prima facie case of anticipation, the Final Office Action must set forth an argument that provides a single reference that teaches or enables each of the claimed elements (as arranged in the claim) either expressly or inherently and as interpreted by one of ordinary skill in the art. All of these factors must be present, or a case of anticipation is not met. Thus, anticipation requires that every element of the claims appear in a single reference. The Viney reference lacks the claimed limitation of “...*a cameral handle having one or more camera functions* ...” and therefore, do not anticipate Applicant’s claimed limitations. Accordingly, Applicant respectfully requests the withdrawal of the final rejection of claims 19 under 35 USC 102(b) because the patent of Viney neither anticipates, clearly anticipates, nor renders as obvious the recited claim limitations. Therefore, Applicant respectfully submits that claim 19 is allowable over the cited reference and solicits reconsideration and allowance of this claim.

In addition, since claims 20 – 29, 31 – 33 depend from the above claim 19 and incorporate all of its limitations, they are patentable for the same reasons given with respect to claim 19, and include additional limitations, which further distinguish them from the reference cited. Therefore, Applicant respectfully submit that claims 20 – 29, 31 – 33 are also allowable over the cited reference and solicits reconsideration and allowance of these claims.

Independent Claim 34:

The newly amended claim 34 uses language similar to the newly amended claim 19. The same arguments above as applied to claim 19 can also be applied to claim 34. Therefore, Applicant respectfully submits that claim 34 is allowable over the cited reference and solicits reconsideration and allowance of this claim.

In addition, since claims 35 - 44 and 46 - 48 depend from the above claim 34 and incorporate all of its limitations, they are patentable for the same reasons given with respect to claim 34, and include additional limitations, which further distinguish them from the reference cited. Therefore, Applicant respectfully submits that claims 35 - 44 and 46 - 48 are also allowable over the cited reference and solicits reconsideration and allowance of these claims.

Dependent Claims 23 and 38:

Applicant respectfully submits that Viney clearly lacks the claimed limitations of claims 23 and 38, which recite, inter alia, “...*wherein the video receiver interface further comprises: an exchangeable video receiver.*”

In relation to these particular claims, the Final Office Action states, “...Viney disclose, as shown in figure 3 and as stated in column 5 (lines 27 – 33), the video receiver interface (22, 23, and 24, and 27) further comprises an exchangeable video receiver (exchangeable for software implementation rather than hardware implementation).”

Column 5, lines 27 – 34 of Viney actually state, “The video chip 27 ... decompresses digital video data received from the total station 1, converts the data back to an appropriate format for display (e.g., NTSC or PAL analog format), and provides the resulting data to the display device 20. In an alternative embodiments, these functions may be implemented in software instead of in video chip 27.” (Emphasis added.) As further taught by Viney (column 5, line 18), the video chip 27 is a “video decompression chip.”

Video chip 27 purportedly interpreted as a “receiver:”

The video chip 27 is not a receiver (see col. 3, lines 30 to 34 of Viney). In fact, “video chip” is a well-known art term, and is in no way equivalent to a receiver, nor should it be grouped as being part of the “video receiver interface (22, 23, and 24, and 27),” as has been done by the Final Office Action. The only element close to the functionality of a “receiver” taught by Viney is the transceiver 22. The video chip 27 does not receive or transmit information within the well-established meaning of the well-recognized art terms “receiver,” “transmitter,” or “transceiver.”

Video chip 27 purportedly interpreted as an “exchangeability video receiver:”

It is respectfully submitted that the Final Office Action’s purported interpretation of column 5, lines 32 – 34 of Viney that state, “[i]n an alternative embodiments, these functions may be implemented in software instead of in video chip 27,” as being equivalent to the claimed limitation of the claims 23 and 38, which recite, inter alia, “...wherein the video receiver interface further comprises: an exchangeable video receiver” is incorrect, and in fact, further mischaracterizes the Viney reference.

Clearly, Viney do not disclose, teach, or suggest (implied or otherwise) the specifically recited claimed limitation of “...an exchangeable video receiver.” Column 5, lines 32 – 34 of Viney teach that in alternative embodiments, the functions that are performed in hardware by the video chip 27 (not a receiver) may be implemented in

software instead. This is not an exchange. In fact, the term “exchange” does not appear in any part of the Viney reference. The passage cited by the Final Office Action relates to an alternative implementation of a hardware component, the video chip 27, in software format. As to the actual transceiver 22 that is taught by the Viney reference, there is no teaching or suggestion (implied or otherwise) for the claimed limitation of “...*an exchangeable video receiver*...” because the transceiver 22 of Viney is never “exchanged” for anything.

Accordingly, Applicant respectfully requests the withdrawal of the final rejection of claims 32 and 38 under 35 USC 102(b) because the patent of Viney neither anticipates, clearly anticipates, nor renders as obvious the recited claim limitations. Therefore, Applicant respectfully submits that claims 32 and 38 are allowable over the cited reference and solicits reconsideration and allowance of these claims.

Dependent Claims 25 and 40:

Applicant respectfully submits that Viney clearly lacks the claimed limitations of claims 25 and 40, which recite, inter alia, “...*wherein the imaging platform motion control further comprises: a selectable response speed controller.*”

In relation to these particular claims, the Final Office Action states, “...Viney disclose, as shown in figure 3 and as stated in column 5 (lines 58 – 61), wherein the imaging platform motion control (input unit 21) further comprises a selectable response speed controller (31). The imaging platform motion control (31) may be a joystick, trackball, touchpad, or any other suitable device, all of which whose response speed is directly proportional to the user’s (selectable) operational speed (speed at which the user operates the motion control).”

Column 5, lines 58 to 61 of Viney **actually** state, “[t]he aiming control 31 may be a joystick, trackball, touchpad, or any other suitable device which allows the user to

manually command movement of the total station 1.” Viney do not disclose, teach or suggest (implied or otherwise) an “... *imaging platform motion control further comprises: a selectable response speed controller.*” In fact, the concept of “selectable response speed controller” does not exist in this reference, and therefore, the reference is mute with respect to the claimed limitation of “... *imaging platform motion control further comprises: a selectable response speed controller.*”

The aiming control 31 may in fact function in the exact opposite manner that the Final Office Action has interpreted. The speed at which the total station 1 moves may be at a constant rate in the direction at which the aiming control 31 is moved, regardless of the speed at which the user operates the motion control 31. Accordingly, it is respectfully submitted that the Final Office Action has made an obscure interpretation of the reference that could be made only in hindsight, using the teachings of the presently claimed invention.

Therefore, Applicant respectfully requests the withdrawal of the final rejection of claims 25 and 40 under 35 USC 102(b) because the patent of Viney neither anticipates, clearly anticipates, nor renders as obvious the recited claim limitations. Applicant respectfully submits that claims 25 and 40 are allowable over the cited reference and solicits reconsideration and allowance of these claims.

Dependent Claims 26 and 41:

Applicant respectfully submits that Viney clearly lacks the claimed limitations of claims 26 and 41, which recite, inter alia, “...*wherein the at least one of iris, zoom, and focus controller further comprises: a corresponding fine adjustment controller.*”

In relation to these particular claims, the Final Office Action states, “...Viney disclose, as stated in column 5 (lines 64 – 67); wherein the at least one of iris, zoom, and focus controller (32) further comprises a corresponding find adjustment controller.”

Column 5, lines 64 to 67 of Viney actually state, “[t]he focus control 32 allows the user to remotely fine tune the focus of the camera 11. Note that, certain embodiments, the camera may have automatic focusing capability, which may eliminate the need for the manual focus control 32.”

It is respectfully submitted that the Final Office Action has made an incorrect interpretation of the reference. Viney do not disclose, teach or suggest (implied or otherwise) “...*the at least one of iris, zoom, and focus controller further comprises: a corresponding fine adjustment controller.*” The focus control 32 is a manual focus control, and nothing more. In fact, even this simple focus control 32 is taught by Viney to be optional if the camera 11 has an automatic focusing capability, which is the opposite of that which is claimed by the claims 26 and 41 that provide for a “...*fine adjustment controller.*” As is clearly taught by the Viney reference column 5 (lines 64 – 67), the claimed concept of “...*fine adjustment controller*” does not exist in this reference, and in fact, is not needed by the total station 1.

Therefore, Applicant respectfully requests the withdrawal of the final rejection of claims 26 and 41 under 35 USC 102(b) because the patent of Viney neither anticipates, clearly anticipates, nor renders as obvious the recited claim limitations. Therefore, Applicant respectfully submits that claims 26 and 41 are allowable over the cited reference and solicits reconsideration and allowance of these claims.

Dependent Claims 31 and 46:

Applicant respectfully submits that Viney clearly lacks the claimed limitations of claims 31 and 4, which recite, inter alia, “...*wherein the remote control further comprises: a programming display and control.*”

In relation to these particular claims the Final Office Action states, "...Viney disclose, as shown in figures 3 and 4 and as stated in column 6 (lines 44 – 67), wherein the remote control (3) further comprises a programming display (20) and control. The display (20) serves as a video display for displaying received images and as a control display for adjusting the field of view."

Neither the Applicant's claims nor the Viney reference recite "...a control display for adjusting the field of view..." Regardless, the following paragraphs are a line-by-line analysis of the cited passage (column 6, lines 44 to 67) by the Final Office Action.

Column 6, lines 44 to 67 of Viney **actually** disclose the method of using the RCVU 3 and the total station 1 in accordance to the steps 401 to 409 of figure 4. It is respectfully submitted that these are not programs, but actual methods, steps, or instructions for the user for using the surveying device of Viney. Steps 401 to 409 merely verbalize the sequence of action taken by the user and the surveying device for using the surveying device of Viney. For example, in column 6, line 44 to 47, Viney state, "[t]hus, in step 401 the user manipulates the aiming control 31 to command the total station 1 to move (i.e., to rotate vertically and/or horizontally), and the RCVU 3 transmits control data to the total station 1 based on these user inputs." Clearly, this is not a program, but a mere instruction or step of what occurs when the user performs a certain function. The user manipulates the aiming control 31, the RCVU 3 transmits this manipulation, and the total station moves.

Column 6, line 48 to 54 of Viney state, "[i]n step 402, the total station responds to the control data by actuating the appropriate servos 14 for the type of movement commanded. In step 403, the user relies upon the visual feedback provided by the camera 11 and the display device 20 to determine whether to continue manipulating the aiming control 31, i.e., to determine whether the target 2 is centered within the field of view of the camera 11." There is only a single display device 20 taught by Viney, and it

is for displaying the target 2 captured by the camera 11. The users look into this display to determine if they have correctly aimed the total station 1 towards a target 2. It is respectfully submitted that the action taken by the user is not programming, nor is the display device 20 “a programming display.” In addition, the entire reference is completely silent with respect to the claimed limitations of “... *programming ...control.*” Claims 31 and 46 of the present invention claim, inter alia, “... *wherein the remote control further comprises: a programming display and control.*”

It should further be noted that claims 31 and 46 depend from their respective independent claims 19 and 34, which recite, inter alia, “... *a video display for displaying the output of imaging device...*” and claims 31 and 46 recite, inter alia, “... *wherein the remote control further comprises: a programming display and control.*” In other words, the limitations of claims 31 and 46 (that include all the limitations of their respective claims 19 and 34) include two separate and distinct displays, “... *a video display for displaying the output of the imaging device...*” as claimed by claims 19 and 34, and “... *a programming display and control...*” as claimed by the respective dependent claims 31 and 46. The Viney reference clearly lacks the claimed additional limitation of “... *a programming display and control*” by claims 31 and 46.

Continuing on, column 6, lines 55 to 58 of Viney state, “[o]nce the user has centered the target 2 within the field of view of the camera 11, the user manipulates the fine tuning focus control 32 in step 44, and the RCVU 3 transmits corresponding control data to the total station 1. Again, it is respectfully submitted that there is no “programming display and control” of any kind disclosed. The user simply focuses the camera 11 by the focus control 32 on the RCVU 3. As stated in column 6, lines 58 to 60 of Viney, “[i]n step 405, the total station responds to the received focus control data by actuating the focusing mechanism of the camera 11.

Column 6, lines 60 to 63 states, “[i]n step 406, the user relies upon visual feedback provided by the camera 11 and the display device 20 to decide whether the target 2 is properly focused in the display.” Again, it is respectfully submitted that this is not a programming display and control. The display device 20 merely shows what the camera 11 “sees,” and the user simply manipulates the focus control 32 accordingly. In fact, the entire focusing steps performed by the user may be omitted if the camera 11 has automatic focusing capability (column 6, lines 63 to 67.)

Therefore, Viney do not disclose, teach or suggest (implied or otherwise) “...wherein the remote control further comprises: a programming display and control.” Accordingly, Applicant respectfully requests the withdrawal of the final rejection of claims 31 and 46 under 35 USC 102(b) because the patent of Viney neither anticipates, clearly anticipates, nor renders as obvious the recited claim limitations. Therefore, Applicant respectfully submits that claims 31 and 46 are allowable over the cited reference and solicits reconsideration and allowance of these claims.

Dependent Claims 32 and 47:

Applicant respectfully submits that Viney clearly lacks the claimed limitations of claims 32 and 47, which recite, inter alia, “...wherein the remote control further comprises: an on-board communication package allowing interaction between a remote control operator and other personnel.”

In relation to these particular claims, the Final Office Action states, “...Viney disclose, as stated in column 4 (lines 5 – 10) and 7 (lines 26 – 28), an ob-board communication package (22 and 23) allowing interaction between a remote control operator (at 3) and other personal (at 1). As stated, a user may be at the imaging platform adjusting the imaging device and a user may be at the remote control operating the imaging platform.”

It is respectfully submitted that none of the Final Office Action cited passages “column 4 (lines 5 – 10) and 7 (lines 26 – 28)” from Viney state, “an on-board communication package (22 and 23) allowing interaction between a remote control operator (at 3) and other personnel (at 1). In addition, nowhere in this reference is it stated, “a user may be at the imaging platform adjusting the imaging device and a user may be at the remote control operating the imaging platform.”

The Final Office Action has cited column 4, lines 5 to 10 of Viney, and the Applicant believes that this may have been due to typographical error. Column 4, lines 5 to 10 of this reference actually state, “In certain embodiments, the camera 11 may also have a viewfinder, which enables the camera to be used as a conventional sighting device from the total station 1, and which may be used to properly align the camera 11 when mounting the camera 11 to the total station 1.”

It is respectfully submitted that it is not understood how this passage is in any way related to the claimed limitation of “...wherein the remote control further comprises: an on-board communication package allowing interaction between a remote control operator and other personnel.”

Applicant believes that a correct citing may have been in column 3, lines 5 to 10 of Viney, which state, “[u]sing the present invention, the user is not required to be located at either the target or the total station to acquire survey measurements. Further, the user can quickly and easily realign the total station to measure different targets from the RCVU.”

As described in column 3, lines 5 to 10, a user is not required to be located at either the target or the total station to acquire survey measurements. This is true, for the user may simply commence the surveying process by actuating the “trigger unit 33” from the RCVU 3, remote from the total station 1. The same user may also remotely move the

total station 1 using the aiming control 31 to “quickly and easily realign the total station to measure different targets.” It is respectfully submitted that the passages cited by the Final Office Action have nothing to do with the claimed “...*an on-board communication package allowing interaction between a remote control operator and other personnel.*” Column 3, lines 5 to 10 disclose communication between a remote controller at one location, and the total station 1 at another location that is remote from the location of the RCVU 3, and not a “...*on-board communication package allowing interaction between a remote control operator and other personnel.*”

As to the final passage (column 7, lines 26 – 28) of Viney cited by the Final Office Action, this passage **actually** states, “[f]urther, a single RCVU of the present invention may be used to control multiple total stations, and a single total station may be controllable from multiple RCVUs.” The claimed limitation for claims 32 and 47 recite, inter alia, “...*wherein the remote control further comprises: an on-board communication package allowing interaction between a remote control operator and other personnel.*”

The cited passage (column 7, lines 26 – 28) simply states that a single RCVU 3 may control multiple total stations 1, or a single total station 1 may be controlled with multiple RCVUs 3. It is respectfully submitted that it is not understood how this passage is in any way related to the claimed limitations of claims 32 and 47, which recite, inter alia, *wherein the remote control further comprises: an on-board communication package allowing interaction between a remote control operator and other personnel.*” There is no on-board communication package taught by the Viney reference to allow interaction between a remote control operator and other personnel. This passage (column 7, lines 26 – 28) simply describes how a single user may control multiple total stations from a single remote control; and how a single total station may be controlled by multiple RCVUs.

Viney do not disclose, teach or suggest (implied or otherwise) the claimed limitations of claims 32 and 47, which recite inter alia, *wherein the remote control further*

comprises: an on-board communication package allowing interaction between a remote control operator and other personnel.” Accordingly, it is respectfully submitted that the Final Office Action has made an incorrect interpretation of the reference.

Therefore, Applicant respectfully requests the withdrawal of the final rejection of claims 32 and 47 under 35 USC 102(b) because the patent of Viney neither anticipates, clearly anticipates, nor renders as obvious the recited claim limitations. Therefore, Applicant respectfully submits that claims 32 and 47 are allowable over the cited reference and solicits reconsideration and allowance of these claims.

D. Claims Rejections - 35 USC §103(a)

The Final Office Action rejected claims 1 - 18 as being unpatentable over Viney in view of Tyler.

Viney and Tyler Do Not Rend Applicant's Claims as Obvious:

The Final Office Action on page 6, states, “[f]or Claim 1, Viney discloses, as shown in figures 1 – 4 and as stated in columns 2 (lines 66 and 67), 3 (lines 16 – 29, 43 – 45), and 56 – 58), 4 (lines 10 – 23 and 63 – 67), 5 (lines 1 – 4 and 12 – 67), and 6 (lines 28 – 32, 44 – 48, and 55 – 60), a remote control imaging system comprising:

an imaging device (11) supported by an imaging platform (2); and

a remote control (3) having a video display (20) for displaying the output of the imaging device (11), one or more imaging platform motion controls (input unit 31), at least one of iris, zoom, and focus controller (32) for imaging device (11), and a camera handle (aiming control 31).

While, Viney discloses that the imaging platform (1) is capable of controllable motion about two orthogonal axes (see column 5, lines 1 – 4), Viney does not disclose where the imaging platform is capable of controllable motion about three orthogonal axes.”

The Final Office Action uses Tyler to modify Viney and states that "...at the time the invention was made, one with ordinary skill in the art would have been motivated to include an imaging platform that is capable of controllable motion about three orthogonal axis, as taught by Tyler, in the remote control imaging system, disclosed by Viney, as a means to provide a gyroscopically stable imaging platform with a greater degree movement. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included an imaging platform that is capable of controllable motion about three orthogonal axis, as taught by Tyler, in the remote control imaging system, disclosed by Viney."

Applicant respectfully traverses the rejection and this interpretation of the references. As further elaborated below, Applicant respectfully submits that at the time the invention was made, there would have been no motivation, and it would not have been obvious to one with ordinary skill in the art to have included an imaging platform that is capable of controllable motion about three orthogonal axis, as purportedly taught by Tyler, in the remote control imaging system, purportedly disclosed by Viney.

The Viney patent relates to a surveying device, which is illustrated in FIGS. 1 as a total station 1 set up on a tripod. Surveying is the science of accurately determining the position of fixed points and the distances between them associated with positions on the surface of the earth, which are used to establish land boundaries for ownership or governmental purposes. Surveyors use an instrument called a "total station," which is a small telescope equipped with an electronic distance-measuring device (EDMD) that is set up on a tripod (as is also illustrated in FIG. 1 of Viney). With a total station, one may determine angles and distances from the instrument to some fixed points to be surveyed. With the aid of trigonometry, the angles and distances may be used to calculate the coordinates of actual positions (northing, easting and elevation) of surveyed points, or the position of the instrument from known points, in absolute terms. Tyler on the other hand,

discloses a gyroscopically stabilized apparatus for aiming a camera at a target object, and does not disclose, teach, or suggest (implied or otherwise) a remote control.

There is no motivation for an addition of the third orthogonal axis to provide a “greater degree movement,” because one of ordinary skill in the art (of surveying) would not require a such an addition since the art of surveying does not require this added third degree of freedom. Surveying merely requires a horizontal and/or vertical freedom, as is clearly taught in Viney (column 5, line 1). Furthermore, the platform of Viney is already stable on a tripod. Therefore, it is not understood why at the time the invention was made, one with ordinary skill in the art would have been motivated to include an imaging platform that is capable of controllable motion about three orthogonal axis, as purportedly taught by Tyler, in the remote control imaging system, as purportedly disclosed by Viney, as a means “to provide a gyroscopically stable imaging platform with a greater degree movement.”

Furthermore, it is respectfully submitted that the Final Office Action is not merely suggesting a minor, obvious modification to Viney patent to make a hypothetical “gyroscopically stable surveying machine,” but this modification requires the replacement of several major components of both references, including internal and external structural changes that are not taught or suggested (implied or otherwise) by either reference.

In particular, the total station 1, including the tripod that it rests on must change, especially where the external box 7 is coupled to the tripod, for adding the gyroscopically stabilizing movement in the third orthogonal axis. In addition, the remote control RCVU 3 of Viney must be modified to allow for the movement of the total station in three orthogonal axis. The aiming control 31 only moves the total station 1 in the directions for which it was made (horizontal/vertical, column 5, line 1 of Viney). Viney does not

teach a third orthogonal axial movement, and therefore, its remote does not have the capability.

Lastly, the Final Office Action purports that Tyler teaches the movement of an apparatus in the third orthogonal axis. However, Tyler does not disclose, teach, or suggest (implied or otherwise) a remote control system. It is respectfully submitted that it is not understood how the Viney remote RCVU 3 would be modified by the Tyler (that has no remote) in order to add to the Viney remote RCVU 3 the capability for remote control of the total station 1 in three orthogonal axis. Therefore, even if the references were somehow combined, the combined references would still not be able to meet the claimed limitations, and in fact, the combined references would produce an inoperative combination. That is, hypothetically, the total station 1 of Viney in combination with Tyler would supposedly have the capability to move in the third orthogonal axis, but Viney remote RCVU would not be able to move the total station 1 in that third axis. Therefore, the modified Viney reference (modified in view of Tyler) would be inoperative, at least with respect to the remote control operations, which means that the combined reference would still not be able to meet the claimed limitations of the present invention.

As stated in MPEP 706.02(j), to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F. 2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (Emphasis added). Accordingly, those

skilled in the art would not look to the Tyler patent to modify the device in Viney to provide or meet the claimed limitations of claims 1.

Therefore, the Applicant respectfully requests withdrawal of the rejection of claim 1 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler render as obvious the claimed limitations for the aforementioned reasons. Further, since claims 2 - 18 depend from the above claim 1 and incorporate all of its limitations, they are patentable for the same reasons given with respect to claim 1. Therefore, Applicant respectfully submits that claims 1 - 18 are allowable over the cited reference and solicits reconsideration and allowance of these claims.

Dependent claim 4:

Applicant respectfully submits that Viney, Tyler, and Viney in view of Tyler clearly lack the claimed limitations of claim 4, which recite, inter alia, “...*a universal adapter for connecting the imaging device and the camera system control.*”

In relation to this particular claim, the Final Office Action states, “...Viney disclose, as shown in figures 1 and as stated in column 4 (line 63 – 67) and 5 (lines 1 - 4), the system of claim 1 further comprising: a universal adapter (connection between the tripod and the imaging platform 1) for connecting the imaging platform (1) to a variety of support devices (tripod and L-bracket, clearly shown in figure 1).”

Column 4, lines 63 to 67 and column 5, lines 1 to 4 of Viney **actually** state, “[a]s noted above, the camera 11 is integrated with the total station 1 such that the line of sight of the camera 11 (indicated by line 38 in FIG. 2) is substantially identical to the line of sight of the scope 10 (indicated by line 39 in FIG. 2). The servos 13 actuate motion of the total station 1 (e.g., rotation about a horizontal and/or vertical axis) to vary the angular settings. The camera 11 is fixedly mounted to the total station 1, such that rotating the total station 1 pans the field of view of the camera 11.”

Viney, Tyler, and Viney in view of Tyler do not disclose, teach or suggest (implied or otherwise) “...*a universal adapter for connecting the imaging device and the camera system control.*” The camera 11 is integrated with the total station 1. Clearly, it is respectfully submitted that the tripod and the so-called “L-bracket” do NOT constitute a universal adaptor. It seems that the external housing 7 of Viney is connected to this so-called L-bracket, and the L-bracket is coupled to a tripod 1 (in accordance with the FIG. 1). The external housing 7 and the so-called L-bracket are configured to be coupled to a tripod for surveying. There would be no reason to provide an elaborate “...*a universal adapter...*” for a surveying device. Most prior art surveying devices, and in particular, the Viney surveying device, is shown to be connected to a tripod through some “L-bracket.” For surveying, all that is required is a simple, stable platform to which a surveying equipment is secured, and this is accomplished by the external housing secured to the L-bracket, and the L-bracket coupled to a tripod.

Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 4 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler render as obvious the claimed limitations for the aforementioned reasons. Hence, the Applicant respectfully submits that claim 4 is allowable over the cited references and solicit reconsideration and allowance of these claims.

Dependent Claim 8:

Applicant respectfully submits that Viney, Tyler, and Viney in view of Tyler clearly lack the claimed limitations of claim 8, which recite, inter alia, “...*wherein the video receiver interface further comprises: an exchangeable video receiver.*”

The claim 8 uses language similar to claims 23 and 38. The same arguments above as applied to claims 23 and 38 can also be applied to claim 8. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 8 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler render as obvious the

claimed limitations for the aforementioned reasons. Hence, the Applicant respectfully submits that claim 8 is allowable over the cited references and solicit reconsideration and allowance of these claims.

Dependent Claim 10:

Applicant respectfully submits that Viney, Tyler, and Viney in view of Tyler clearly lack the claimed limitations of claim 10, which recite, inter alia, “...*wherein the imaging platform motion control further comprises: a selectable response speed controller.*”

The claim 10 uses language similar to claims 25 and 40. The same arguments above as applied to claims 25 and 40 can also be applied to claim 10. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 10 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler render as obvious the claimed limitations for the aforementioned reasons. Hence, the Applicant respectfully submits that claim 10 is allowable over the cited references and solicit reconsideration and allowance of these claims.

Dependent Claim 11:

Applicant respectfully submits that Viney, Tyler, and Viney in view of Tyler clearly lack the claimed limitations of claim 11, which recite, inter alia, “...*wherein the at least one of iris, zoom, and focus controller further comprises: a corresponding fine adjustment controller.*”

The claim 11 uses language similar to claims 26 and 41. The same arguments above as applied to claims 26 and 41 can also be applied to claim 11. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 11 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler render as obvious the claimed limitations for the aforementioned reasons. Hence, the Applicant respectfully

submits that claim 11 is allowable over the cited references and solicit reconsideration and allowance of these claims.

Dependent Claim 15:

Applicant respectfully submits that Viney, Tyler, and Viney in view of Tyler clearly lack the claimed limitations of claim 15, which recite, inter alia, “...*wherein the video display further comprises: a television tuner.*”

In relation to this particular claim, the Final Office Action states, “...Viney et al. disclose a video display (20); however, Viney do not disclose wherein the video display (20) comprises a television tuner. **Official Notice** is taken that both the concept and advantage of providing a video display comprising a television tuner are well-known and expected in the art as means to provide entertainment to the remote control operator when the imaging device is not in use.”

It is respectfully submitted that a surveyor would not use surveying equipment for entertainment when it is not in use. Surveying equipment, such as those taught by Viney, are designed or made for a very specific and highly technical field, and are in no way made to be used for entertainment. In particular, the surveyors themselves would not use such highly specialized equipment for mere entertainment when this highly technical equipment is not in use.

As was stated above, surveying is the **science of accurately** determining the position of fixed points and the distances between them associated with positions on the surface of the earth, which are used to establish land boundaries for ownership or governmental purposes. A television tuner would not be well-known nor would it be expected in the art of surveying to provide for entertainment when this highly technical equipment is not in use. With the surveying equipment, one may determine angles and distances from the instrument to some fixed points to be surveyed, and not be expected to

be entertained by this equipment. With the aid of trigonometry, the angles and distances may be used to calculate the coordinates of actual positions (northing, easting and elevation) of surveyed points, or the position of the instrument from known points, in absolute terms. Clearly, neither the art of surveying nor the equipment used within this art is about entertainment.

Accordingly, a surveying equipment would not be modified for use as an entertainment device because it is a highly specialized equipment that is used for a very specific purpose. Nonetheless, the Final Office Action by an Official Notice modifies the Viney reference, which is related to the art of surveying, to meet the claimed limitation of claim 15, which recites, inter alia, “...*wherein the video display further comprises: a television tuner.*”

MPEP 2144.03 states that Official Notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known (in this case, well-known in the art of surveying, which relates to modification of the Viney reference). As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be “capable of such instant and unquestionable demonstration as to defy dispute” (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)).

Furthermore, MPEP 2144.03 states if the facts are not well-known, i.e., not capable of instant and unquestionable demonstration as being well-known, then Official Notice of such facts is inappropriate without citation to a prior art reference. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art (in this case, the pertinent art is the art of

surveying, which relates to modification of the Viney reference by the assertion of the Official Notice). *In re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21.

Regarding the Applicant's application, the technology taught is highly technical as it relates to the field of remote controls and remote control feedback systems that use a very complex, miniaturized gyroscopically stabilizing platform for movement of a complex imaging system, in three orthogonal axis, requiring highly skilled engineering, photography, and pilot-operator personnel. The Viney reference is also related to a highly technical field, requiring highly trained personal and highly technical equipment. Therefore, as stated above, Final Office Action's assertions of technical facts in areas of technology disclosed by the present invention, and the modification of Viney in view of the Official Notice must be supported by citation of some reference work, and allegations concerning specific knowledge of the prior art, which might be peculiar to a particular art (in this case, modification of Viney which is in the art of surveying, to meet the limitations of claim 15) should be supported by the Final Office Action. Otherwise, if no evidence is provided, then there is no support for an obviousness rejection. See *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002); *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings **will not support an obviousness rejection**).

The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge, showing both the concept and advantage of providing a video display comprising a television tuner that are well-known and expected in the art (of **surveying**, where Viney is used, modified by the Official Notice, and Applied against claim 15) as means to provide entertainment to the remote control operator (the person who works as a surveyor) when the imaging device is not in use. See *Soli*, 317 F.2d at 946, 37 USPQ at

801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241. The applicant should be presented with the explicit basis on which the examiner regards the matter (...a television tuner...) as subject to Official Notice and be allowed to challenge the assertion in the next reply after the Office Action in which the common knowledge statement was made.

Therefore, Applicant **strongly** traverses the assertions made by the Official Notice in the Final Office Action, and respectfully demands evidence from the Office to cite a reference, which antedates the effective filing date of the present application, and that supports such a position with respect to the claim and the art of surveying that relates to Viney in the next non-Final Office Action. MPEP 2144.03.

Lastly, if such assertions by the Official Notice in the Final Office Action is based on facts within the personal knowledge of the Examiner, it is respectfully requested that an affidavit from the Examiner be provided to Applicant, stating specifically the facts that support such assertions that show as common knowledge in the art of surveying the claimed “... *video display further comprises: a television tuner.*” That is, the affidavit from the Examiner must show both the concept and advantage of providing a video display comprising a television tuner that are well-known and expected in the art (of **surveying**, where Viney is used, modified by the Official Notice, and Applied against claim 15) as means to provide entertainment to the remote control operator (the person who works as a surveyor) when the imaging device is not in use.

Applicant respectfully requests that if the Office continues to maintain the assertions made under Official Notice, then the finality of the Office Action be withdrawn to provide the Applicant the opportunity for an appropriate response. MPEP 2144.03. Nevertheless, Applicant respectfully requests the withdrawal of the rejection of claim 15 under 35 USC 103 because Viney, Tyler, or Viney in view of Tyler do not render as obvious the claimed limitations for all the aforementioned reasons. Hence,

Applicant respectfully submits that claim 15 is allowable over the cited reference and solicits reconsideration and allowance of this claim.

Dependent claim 16:

Applicant respectfully submits that Viney, Tyler, or Viney in view of Tyler clearly lack the claimed limitations of claim 16, which recite, inter alia, “...*wherein the remote control further comprises: a programming display and control.*”

The claim 16 uses language similar to claims 31 and 46. The same arguments above as applied to claims 31 and 46 can also be applied to claim 16. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 16 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler renders as obvious the claimed limitations for the aforementioned reasons. Hence, the Applicant respectfully submits that claim 16 is allowable over the cited references and solicit reconsideration and allowance of these claims.

Dependent claim 17:

Applicant respectfully submits that Viney, Tyler, or Viney in view of Tyler clearly lack the claimed limitations of claim 17, which recite, inter alia, “...*wherein the remote control further comprises: an on-board communication package allowing interaction between a remote control operator and other personnel.*”

The claim 17 uses language similar to claims 32 and 47. The same arguments above as applied to claims 32 and 47 can also be applied to claim 17. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 17 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler renders as obvious the claimed limitations for the aforementioned reasons. Hence, the Applicant respectfully submits that claim 17 is allowable over the cited references and solicit reconsideration and allowance of these claims.

Dependent claims 30 and 45:

Applicant respectfully submits that Viney, Tyler, or Viney in view of Tyler clearly lack the claimed limitations of claims 30 and 45, which recite, inter alia, "*...wherein the video display further comprises: a television tuner.*"

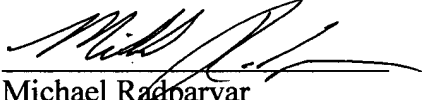
The claims 30 and 45 uses language similar to claim 15. The same arguments above as applied to claim 15 can also be applied to claims 30 and 45. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claims 30 and 45 under 35 USC 103 because neither Viney nor Tyler nor Viney in view of Tyler renders as obvious the claimed limitations for the aforementioned reasons. Hence, the Applicant respectfully submits that claims 30 and 45 are allowable over the cited references and solicit reconsideration and allowance of these claims.

V. CONCLUSION

It is respectfully submitted that the case is now in condition for allowance, and an early notification of the same is requested. If it is believed that a telephone interview will help further the prosecution of this case, Applicant respectfully requests that the undersigned be contacted at listed telephone number (323) 556-0648.

Respectfully submitted,

10/10/05
Date


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